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PhD thesis

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Animal remains from the mid 12th-13th century (Árpád Period) village of Kána, Hungary

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1. Research and its objectives

A village dated to the second half of the Period of the Árpád Dynasty (AD 11th-13th century) stands in the center of my research. This site is unique in Hungary regarding the completeness of excavation. The late Árpád Period village of Kána came to the light in the 11th district of Budapest, during the excavations preceding the building of present-day Újbuda-Tóváros (previously called Kőérberek-Tóváros) residential park. The archaeological excavation was directed by archaeologists of the Budapest History Museum between autumn 2003 and summer 2005. The 220,000 square metre excavated area yielded finds from different archaeological periods between the Neolithic and Middle Ages. Prehistoric field works were led by László András Horváth and Gábor Szilas, those of the Migration Periods by Attila Horváth and Anita Korom. Excavations concerning the Middle Age were directed by György Terei. The plans of the residential park totally covered the village Árpád Period of Kána, which could therefore be excavated completely on a total of 16 acres. Archaeologists brought to light the parish church and the surrounding cemetery with a total of 1077 graves, 198 semi-subteranean houses and four large store buildings, a number of open air ovens, hundreds of storage and refuse pits. Trenches separating the buildings were also discovered during field work. Based on the finds, settlement at the village began during the middle of the 12th century, but from the middle of the 13th century a slow depopulation began. Objects datable to the beginning of the 14th century occurred only sporadically. The finds (the church built using ashlar stones, the high-standard stone carvings, the large number of stone-lined graves in the settlement, as well as the quantity and quality of glassware, the coins, the ornamented artefact for attire, and the many good-quality iron artefacts recovered at the settlement) suggest the unusual richness of the population compared to rural nature of the settlement.

The archeaological exploration of the nearby Kána Abbey was carried out by Katalin H. Gyürky, who excavated the ruins of the late benedictine monastery between 1981 and 1989. The relation between the abbey and the village seems evident in light of historical as well as archaeological data. Although no direct written references are known to the village, from the 1325 land description of Nevegy village we can not only identify the abbey, but the text also reveals that Kána village was located within the land of the abbey. Therefore its population lived under the rule of the parochial lord. The relation between the abbey and the village is also illustrated by similar burial customs: 40 percent of the graves from the village were lined with decorative fretwork stones, and many similar graves were found in the abbey as well.

The reasons of depopulation in the village are unknown, but it might be related to the expansion of viticulture, which caused the decrease of plough-lands. As the lord of the abbey ruled over the population, it can also be assumed that the abandonment of the village was related to his decisions.

The completeness of the excavation resulted in an abundance of finds, which was also shown in the exceptionally high number of animal remains. Archaeozoological analysis therefore had two aims: on the one hand to explore animal use by the late residents of the village, on the other the investigation of how well do phenomena observed on a large scale in Kána fit the economic and cultural image „typical" of the Árpád Period.

2. Results

A total of 19,529 animal remains came to light from Árpád Period features which, even discounting fragments that could not be identified on a species or at least family level, results in a substantial assemblage consisting of over twelve thousand pieces. The majority of bones came from domestic animals, mainly from cattle. Small stock, represented by sheep and/or goat and pig, followed far behind. The ratio of dog and horse remains was relatively high, which, in the case of the first can be explained by the presence of more-or-less intact skeletons found in special features. The complete dog skeletons originate from different sized individuals, indicative of a number of medieval forms, but these (except for a greyhound-like individual based on its skull conformation) can not be referred to modern breeds because of the high genetic „plasticity" resulting from the high reproduction rate of dogs. The rest of the domestic species (donkey, hen, goose and cat) are represented by far fewer fragments. Although the donkey bones from Kána can not be regarded unique finds, they are not too frequent in Árpád Period deposits.

The ratio of wild animals can be considered low, in particular if we set aside smaller species which may be intrusive in archaelogical features as a result of „taphonomic gain" (e. g. hamster, ground-squirrel, frogs and tortoise). Shed antlers of red and roe deer also foms a different category as they could be hand-collected by villagers. Remains of red deer, wild boar, hare, and fox may be considered those of hunted animals, the latter supposedly also having been hunted for fur. There were two bones that might have originated either from aurochs or bison, but neither of those could be dated securely to the Árpád Period. Among wild birds, in addition to those found more frequently in Árpád Period deposits (partridge, quail and mallard) it was the first time when gyrfalcon could be indentified. Bones of raptors such as sparrow-hawk, goshawk and golden eagle were found until now usually in high-status (royal, parochial and military) deposits, none from rural assemlages. On the tibia of the golden eagle a cutmark could be observed raising the question whether it should be regarded kitchen refuse, while the remains of the other three diurnal birds of prey may be indicative of falconry. Although the remains of carp, pike and catfish identified are the most frequently encountered fish species in medieval deposits in Hungary, the small sized fish bones are underrepresented in hand-collected assemblages. Shells of riverine mussels were also found in large numbers. One feature yielded a poorly preserved fragment of a scallop, which may be interpreted as a fossil find.

Basically two types of exploitation of the animals can be reckoned with, primary and secondary. The first includes slaughter i. e. the consumption of meat and fat, as well the usage of bones and skin). Secondary exploitation means the production of seasonally renewable animal goods such as milk, fleece, and eggs, or those continuously available (work-power, manure). However, the presentation of these latter forms of exploitation yields little archeozoological evidence. It could therefore be discussed mostly on the basis of contemporaneous and later written sources and etnographic parallels.

Through the investigation of the archaeozoological assemblage we gain insight mostly in the primary exploitation of animals, most of all meat consumption customs of the villagers. Based on the animal bones the people of Kána ate mainly beef, mutton and pork, completed with meat from the afore-mentioned domestic poultry, wild mammals (red deer, wild boar and

hare) and fish. Naturally, in addition to meat, we can suppose the consumption of fats and tallow, dairy products and egg, although from these only the remains of eggs can be archaeologically identified. Although horses were kept mainly for their secondary (riding and traction), in some cases I could find cut and butchered bones coming from meaty parts of the animal, indicative of the occasional consumtion of horse meat. Remains of domestic animals also characterize animal keeping by the locals, in which (based on both the number of identified fragments and the number of individuals) ruminants played the greatest role.

There is only indirect evidence concerning the use of animal skins, hides and fur: on one one hand we can study cutmarks observed on bones unrelated to meat consumption (e.g. on the dry limb bones at the end of extremities, or cutmarks on the bones not meat-purpose animals). The other type of finds is even more indirect, related to leatherware such as beltbuckles or horse-harnessing, suggesting the use of animal raw materials.

Beyond their roles in alimentation and clothing, tools made from animal remains can also be counted as primary uses. Through bone manufacturing we can get a glimpse into the material culture of the Árpád Period population. Based on the crude execution of bone and antler tools it seems that these artifacts were made at home for domestic usage, and the raw material was gained from ordinary food refuse. Among bone tools there were skates, different toys, pipes, bone anvils and other objects of everyday life. Sometimes antlers were worked into buckles and simple adornments. In one case, a carefully elaborated, highly worn, cross-shaped medallion, came to light from a child's grave together with a small bronze plate. Unlike bone tools made from household refuse, antler as a raw material was obtained either by hunting stags, or simply collecting pieces of shed antler. A medallion made from mussel shell was also recovered, but it was more rudimentary in shape than the cross-shaped pendant. On the edge of some shells traces of abbrasion were observed, these specimens may have been used as spoons or scrapers. Based on the known medieval parallels, the (possibly fossil) scallop fragment may well have been a pilgrim-badge, but in lack of traces of shaping or usage this assumption can not be proven on the basis of the small fragment. In addition to the rudimentary, home made tools sometimes more carefully elaborated pieces appeared in the material (for example a lathe-turned needle-holder and another turned piece with unknown function), which, presumably, came to the village as imported ware.

Although animal sacrifices can also be regarded as primary usages, because of the ritual subject they somehow differ from the everyday slaughter. In Kána 21 pots buried for ritual purposes were found, 15 of which contained sacrificed animals. Although archaeologists had found traces of similar phenomena before, until now evidence for this tradition has never been discovered in such large numbers. Pots buried upside down in houses can be regarded as building sacrifices, but in case of those coming from pits and trenches we can also reckon with possibly apotropaic functions. The sacrificed animals were often accompanied with iron objects. These were in most cases nails, but in one case the pot contained a needle and a knife. The explanation can be sought in the protective role of iron cutting objects, a widespread, ancient belief. Apart from the chicken bones and eggs usually found under pots at other medieval sites, the pots from Kána contained remains of species, namely dogs and cats, barely known in such ritual contexts. In five pots pike bones were found, which for the time being have not been known in such a role either. The finds testify that the custom of construction sacrifice survived well alongside Christianity, which is not

only shown by the survival of elements of the broader tradition in the 20th century as well, but also by the fact that similar sacrifices were found in parochial buildings not only in the Carpathian basin, but also all over Europe. The Modern Age use of puppies for such purpose, however, remains unknown.

The archaeological recognition of secondary exploitation is much more difficult than those of primary uses, as its evidence usually remains indirect with the exception of eggshells. For example, a number of pathological deformities (e.g. periostosis and periarthritis on legs, haematoma, diseases on vertebrae) could be observed on cattle and horse bones. These may be associated with the increasing use of the animal in work, indirectly inplying yokeing for transport as well as tillage and riding. Although among the remains of cattle the bones of cows dominated, the presence of probable draught oxen could also be detected.

In the absence of sophisticated laboratory procedures (fat residue analysis), proving cow-, sheep-, goat- and horse milk consumption can also be very difficult in the archaeological material. However, „depressions", namely bone absorbtions, on the horn cores of two ewes may be indirectly related to overmilking. Dams sometimes mobilize calcium from their own bones in order to assure the optimal composition of their milk, which can result in such deformities.

The use of fleece, furs and feathers can also be reconstructed only using indirect evidence: the first formed part of the attire, while feathers were an indispensable element of arrows (evidenced by arrowheads found at Kána), and may have served decorative purposes as well.

Manure may be used in vaious ways. It's primary role must have been the enrichment of plough-lands, but based on etnographic parallels, we can reckon with its uses as fuel or building material. In addition to vegetal substances, the excrement of dogs played a technical role in the tanning of skins and hides. Manure is usually not preserved. However, a piece of petrified dog excrement came to the surface from one of the pits, which owes its preservation to the increased mineral content resulting from intense bone consumption by the dog.

Dogs (in addition to their role as sacrificial animals) had an important role to play in the life of medieval Kána. Their secondary uses included keeping guard dogs, herding and hunting. However, while guarding their territory is instinctive to most dogs, some breeds can be better used for animal driving or hunting than others even if modern breeds cannot be directly equated with medieval forms. A greyhound-shaped dog from Kána supposedly served as a hunting dog. Similar skeletons are known from five other Árpád Period sites and written sources also refer to serfs keeping hounds.

Not counting the individual whose remains were found in a sacrificial pot, the function of cats was supposedly limited on protecting the grain and stores from rodents.

Árpád Period falconry was known so far mainly from written and iconographic sources. Osteological evidence has been rare. It can be explained with that the majority of the falconer's equipment was made of organic material. Based on the remains of diurnal birds of prey found in Kána it can be presumed that some villagers were involved with this form kind of hunting.

3. Summary

Due to the complete recovery and unique richness of the archaeological material from Kána, this site has an exceptional role to play in the research of Árpád Period villages. The archaeozoological analysis offers insight into the various relationships between the settlement's inhabitants and the fauna of the surrounding natural and economic environment.

Animal bone materials from the Árpád Period village of Kána were dominated by cattle remains, while the contributions of poultry and wild animals were low. Other species of livestock (pig, sheep and/or goat and even horse) played varying roles in the diet. Dog and cat were not eaten but used in rituals. The composition of animal bone assemblages is influenced by a number of factors such as sample size, fragmentation and the number of complete skeletons impacting the species ratios, geographical environment, the types of the excavated features. These all need to be considered prior to the reconstruction of dietary customs and other forms of animal exploitation. Due to its large size and immense diversity, the animal bone assemblage from Kána enriches our knowledge concerning animal exploitation in early medieval Hungary, offering several previously unknown details.

Although animal remains yielded valuable information in themselves, they can be best evaluated in light of the complete archaeological material and documentary sources.

4. List of publications related to the thesis

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